

WHAT IS CLAIMED IS:

- 1 1. A method comprising:
 - 2 a) capturing a plurality of image parts;
 - 3 b) determining position information corresponding to
 - 4 each of the plurality of image parts; and
 - 5 c) generating image information using, at least, the
 - 6 plurality of image parts and the corresponding
 - 7 position information.
- 1 2. The method of claim 1 wherein the position information
- 2 includes coordinate information.
- 1 3. The method of claim 1 wherein the position information
- 2 includes change of position information.
- 1 4. The method of claim 1 wherein the act of capturing a
- 2 plurality of image parts includes focusing light reflected
- 3 from a surface onto an imaging device, and
- 4 wherein the act of determining position information
- 5 includes accepting, by the imaging device, light reflected
- 6 from the surface.
- 1 5. The method of claim 4 wherein the light reflected from
- 2 the surface is emitted from a single light source.
- 1 6. The method of claim 4 wherein the light reflected from
- 2 the surface is emitted from a first light source and a
- 3 second light source,
- 4 wherein the light emitted from the first light source
- 5 and reflected from the surface onto the imaging device is

6 used in the act of capturing a plurality of image parts,
7 and
8 wherein the light emitted from the second light source
9 and reflected from the surface onto the imaging device is
10 used in the act of determining position information.

1 7. The method of claim 6 wherein the light emitted from
2 the first light source has a larger angle of incidence with
3 the surface than the light emitted from the second light
4 source.

1 8. The method of claim 1 wherein the act of capturing a
2 plurality of image parts includes focusing light reflected
3 from a surface onto a first imaging device, and
4 wherein the act of determining position information
5 includes focusing light reflected from the surface onto a
6 second imaging device.

1 9. The method of claim 8 wherein the light reflected from
2 the surface is emitted from a single light source.

1 10. The method of claim 8 wherein the light reflected from
2 the surface is emitted from a first light source and a
3 second light source,

4 wherein the light emitted from the first light source
5 and reflected from the surface onto the imaging device is
6 used in the act of capturing a plurality of image parts,
7 and

8 wherein the light emitted from the second light source
9 and reflected from the surface onto the imaging device is
10 used in the act of determining position information.

1 11. The method of claim 10 wherein the light emitted from
2 the first light source has a larger angle of incidence with
3 the surface than the light emitted from the second light
4 source.

1 12. Apparatus comprising:

- 2 a) means for capturing a plurality of image parts;
- 3 b) means for determining position information
4 corresponding to each of the plurality of image parts;
5 and
- 6 c) means for generating image information using, at
7 least, the plurality of image parts and the
8 corresponding position information.

1 13. The apparatus of claim 12 wherein the position
2 information includes coordinate information.

1 14. The apparatus of claim 12 wherein the position
2 information includes change of position information.

1 15. The apparatus of claim 12 wherein the position
2 information includes orientation information.

1 16. The apparatus of claim 12 wherein the position
2 information includes acceleration information.

1 17. The apparatus of claim 12 wherein the position
2 information includes velocity information.

1 18. The apparatus of claim 12 wherein the means for
2 capturing a plurality of image parts includes
3 1) a light source, and

- 4 2) an imaging device, and
5 wherein the means for determining position information
6 includes
7 1) the light source, and
8 2) the imaging device.

- 1 19. The apparatus of claim 12 wherein the means for
2 capturing a plurality of image parts includes
3 1) a first light source, and
4 2) an imaging device, and
5 wherein the means for determining position information
6 includes
7 1) a second light source, and
8 2) the imaging device.

- 1 20. The apparatus of claim 12 wherein the first light
2 source and the second light source emit light that
3 illuminates a surface, and
4 wherein the light emitted from the first light source
5 has a larger angle of incidence with the surface than the
6 light emitted from the second light source.

- 1 21. The apparatus of claim 19 wherein the second light
2 source is a light emitting diode.

- 1 22. The apparatus of claim 19 wherein the second light
2 source is an infra-red light emitting diode.

- 1 23. The apparatus of claim 19 wherein the second light
2 source is a tunable light source able to modulate at least
3 one of wavelength, polarization, and amplitude.

1 24. The apparatus of claim 12 wherein the means for
2 capturing a plurality of image parts includes
3 1) a light source, and
4 2) a first imaging device, and
5 wherein the means for determining position information
6 includes
7 1) the light source, and
8 2) a second imaging device.

1 25. The apparatus of claim 12 wherein the means for
2 capturing a plurality of image parts includes
3 1) a first light source, and
4 2) a first imaging device, and
5 wherein the means for determining position information
6 includes
7 1) a second light source, and
8 2) a second imaging device.